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## ABSTRACT

## Include Figure 1

A point-to-multipoint network arrangement, method of operation and related signals for a network comprising a head-end station and at least one subscriber station connected to the head-end by means of a shared medium high-speed point-to-multipoint network (preferably a passive optical network). The method involves transmitting data upstream using a packet-switched transport protocol (e.g. Ethernet) over TDMA. By using high-speed upstream transmission with relatively long time slots and relatively short guard bands, the need for complex ranging schemes is obviated.